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(54) Title: MOLECULAR SWITCHES AND METHODS FOR MAKING AND USING THE SAME

(57) **Abstract:** The invention provides molecular switches which couple external signals to functionality and to methods of mak-
ing and using the same. The switches according to the invention can be used, for example, to regulate gene transcription, target
drug delivery to specific cells, transport drugs intracellularly, control drug release, provide conditionally active proteins, perform
metabolic engineering, and modulate cell signaling pathways. Libraries comprising the switches and expression vectors and host
cells for expressing the switches are also provided.

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